

Figure 7-A-1.1 Nomograph of deep water significant wave height prediction curves (English units)

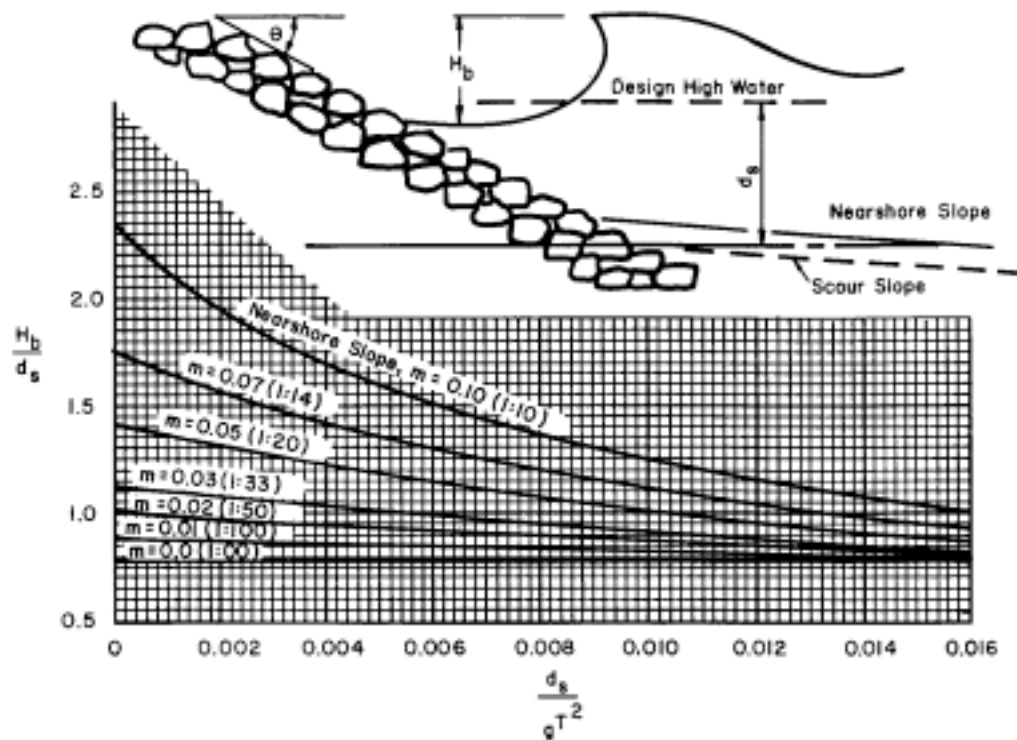


Figure 7-A-2 Design Breaker Wave

Design Breaker Wave

The following example illustrates how to use Figure 7-A-2 to estimate the maximum breaker wave height.

Example

By using hindcast methods, the significant wave height (H_s) has been estimated at 1.2 m (4 ft) with a 3-s period. Find the design wave height (H_b) for the slope protection if the depth of water (d_s) is only 0.6 m (2 ft) and the near-shore slope m (ft) is 1V:10H.

Solution

$$(d_s/gT^2) = 0.6 \text{ m}/[(9.81 \text{ m/s}^2)(3 \text{ s})^2] = 0.007$$

From Figure 7-A-2, $H_b/d_s = 1.4$, and $H_b = 0.84 \text{ m}$

Answer

Since the maximum breaker wave height, H_b , is smaller than the significant deepwater wave height, H_s , the design wave height is 0.84 m.